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The new pre-cataclysmic binary PG 2200+085

Shimansky V., Sakhibullin N., Bikmaev I., Ritter H., Suleimanov V., Borisov N., Galeev A.
Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

Aims. We present the results of spectroscopic- and orbit-sampled photometric observations of the faint UV-excess object PG 2200+085. Methods. The optical CCD photometry observations of this object were performed by the Russian-Turkish 1.5-m telescope RTT150 at the TUBITAK National Observatory (Turkey). The long-slit optical spectroscopy observations with 2.6 Å resolution were carried out by 6-m telescope BTA at the Special Astrophysical Observatory (Russia). Results. The photometric variations over two nights are almost sinusoidal with an amplitude Δm v =0 m.04 and a period of P = 0.3186 d. Such a light curve is typical of a detached close binary with an illumination effect or the ellipsoidal deformation of a secondary star. The observed spectrum clearly displays a featureless blue continuum of a hot component and a rich absorption-line and molecular band K-star spectrum. The Call line profiles with strong emission cores are remarkably similar to those of V471 Tau. Conclusions. We tentatively classify PG 2200+085 as a pre-cataclysmic binary of the V471 Tau type. © ESO 2006.

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Keywords

Stars: binaries: close, Stars: binaries: spectroscopic, Stars: individual: PG 2200+085, Stars: novae, cataclysmic variables